

907-2.



ELECTRICALLY OPERATED

TEMPERATURE

REGULATING

SYSTEMS

GOLD CAR HEATING & LIGHTING CO.,
BUSH TERMINAL,
220-36TH STREET, BROOKLYN, N.Y.

100 GOLD CAR HEATING
& LIGHTING CO.

1901-1902
1903-1904

GOLD'S

ELECTRIC THERMOSTAT TEMPERATURE REGULATING SYSTEMS

FOR THE AUTOMATIC CONTROL OF STEAM, HOT
WATER OR HOT AIR HEATING APPARATUS IN RESI-
DENCES, OFFICES AND PUBLIC BUILDINGS, ALSO
FOR MAINTAINING A PRE-DETERMINED TEM-
PERATURE IN TANKS, VATS, DRY ROOMS, ETC.

EACH CONTROL "A UNIT BY ITSELF"
OPERATED ENTIRELY BY ELECTRICITY.

OPERATING SUCCESSFULLY ON HUNDREDS OF
RAILWAY CARS, BOTH ELECTRIC AND STEAM.
(SEE NOTE PAGE 28)

1921

GOLD CAR HEATING & LIGHTING CO.

BUSH TERMINAL

220 36TH STREET

BROOKLYN, N. Y.

(FORMERLY AT 17 BATTERY PLACE, NEW YORK)



PREAMBLE

The most important requisite and one which should never be overlooked in the heating of buildings is the regulation of temperature. A system of heating may be ever so good, but if the regulation is poor the comfort and health of the occupants suffer.

In manufacturing, much material has been ruined for want of proper temperature regulation.

The annoyance of improper regulation of temperature is more and more creating a demand for thermostatic control.

ECONOMY OF AUTOMATIC TEMPERATURE REGULATION

Automatic temperature regulating systems should be considered as an investment and not an expense. The economy in automatically maintaining constant and reasonable temperatures has been repeatedly proven by comparing records of attendance, work performed, steam or coal consumed, etc., in the same building before and after installation. The saving in fuel alone, which at the present time is a serious problem, would warrant its application.

In certain factories tests have shown that, after application of temperature regulation, the output had increased and the number of employees away on sick leave greatly lessened.

An Eastern mercantile concern has figured that each cold in its office force cost the company \$24.00 directly or indirectly.

ADVANTAGES OF GOLD'S ELECTRIC SYSTEMS

Gold's systems are electric, obtaining their energy from the lighting or motor circuits.

Entire buildings or separate rooms may be equipped very readily without the installation and maintenance of an expensive air compressor or electric batteries.

The existing piping need not, in most cases, be changed in any way to install Gold's systems, and the simplicity of the devices herein described should be convincing evidence that they are rugged and fool proof and will withstand the service without the constant attention of the manufacturer's repair man.

Many devices have been placed on the market during the past fifteen years giving more or less satisfaction, their installation and maintenance costs in many instances have made them impracticable for their general use.

No one who has ever occupied an office or home equipped with Gold's thermostat control would be willing to return to the old system of hand control.



THERMOSTATS

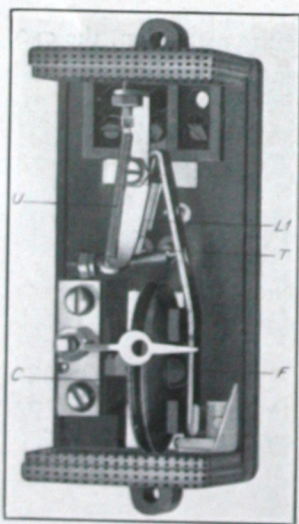
The essential feature of any temperature regulating system is the thermostat itself, which must be sensitive enough to operate under very slight changes of temperature, yet rugged enough to stand the service required of it without renewals or frequent expert adjustment by the manufacturer.

Gold's thermostat was originally manufactured for controlling the temperature of railway cars, and it is reasonable to believe that any thermostat that will operate under the rough usage encountered in railway service will certainly give the service required of it in any building.

Your attention is called to a copy of a letter on page 29 received from the well known Heating Engineer Mr. Wm. J. Baldwin, Jr., under date of May 7th, 1919, after the completion of the first season's operation of Gold's thermostatic control in his office, and would state further that, up to the date of the issuance of this booklet no adjustment or repairs have been necessary and the outfit after these three season's operation is in perfect working order.

METHOD OF OPERATION

Gold's thermostat is of the positive type, moving through its entire range instantly and causing a similar motion in the valve or damper from fully open to fully closed. (See illustration.)



GOLD'S THERMOSTAT

No. 1066
(Interior View)

As explained previously, Gold's thermostat is electrically operated, current being derived from either the lighting or motor circuit.

The temperature sensitive element is the double diaphragm C containing a volatile liquid, the front wall transmitting its motion to lever arm F, lever arm F operating a switching mechanism opening or closing the electric circuit.

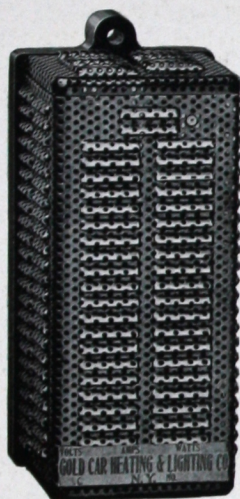
For example, as long as the diaphragm is expanded by any temperature above the critical point for which the thermostat is set the lever arm L-1 will remain in contact with T. When the temperature falls, allowing the diaphragm to contract gradually, the lever arm L-1 will continue to bear upon this contact until the continued recession of the diaphragm overcomes the tension of the spring U. When this occurs the lever arm L-1 jumps away, thus breaking the contact by a quick and positive movement of over three-eighths of an inch. In other words Gold's thermostat performs the function of an ordinary single pole switch, actuated by temperature changes.

The contact points are of silver which has proven the best metal for this purpose.

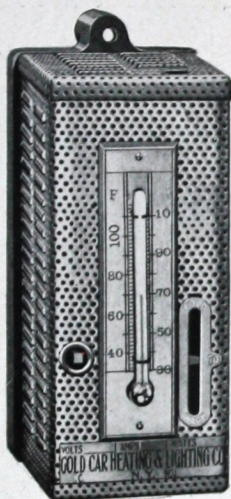
The temperature sensitive diaphragm is constructed in two sections joined in the center and is hermetically sealed.



GOLD'S STANDARD THERMOSTATS NO. 1066



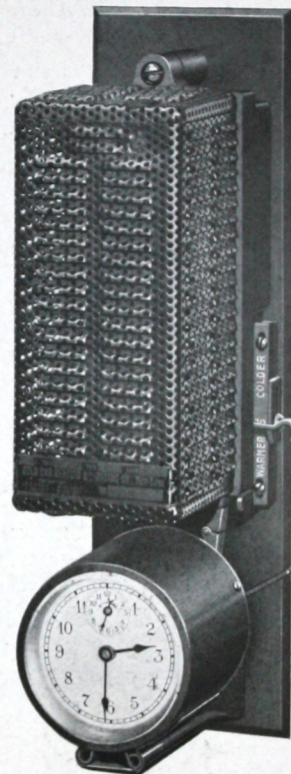
Type A



Type B



Type C



Type D

TYPE A Plain case, for use where a permanent setting is desired. This type of case prevents tampering or changing of the setting by unauthorized persons.

TYPE B Adjustable by aid of Key furnished with the instrument—central point 70° F. with a range of 5° above or below this point.

TYPE C Night and Day type—Day Setting 72° F. Night Setting 60° with intervening settings between these points. Adaptable for installation where it is desired to turn heat down during the night period, etc.

TYPE D Time Attachment—This thermostat is arranged with a clock to open the drafts of the furnace or turn on the steam at a pre-determined time in the morning, usually before arising, as in the home, or before the arrival of the working force in the factory or office, thus automatically warming the premises, where a cooler or lower temperature has been maintained during the night.

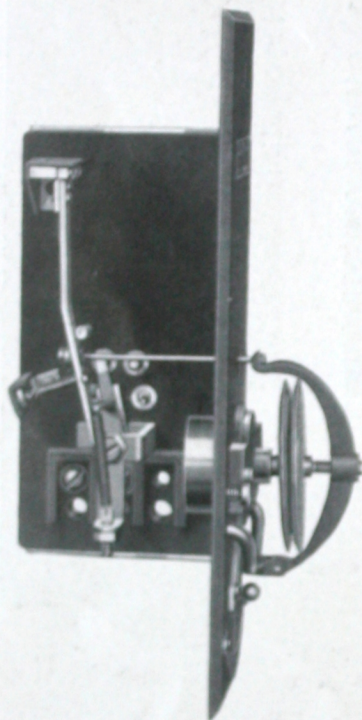
THERMOSTAT CASES

Thermostats are furnished with our standard cases, which are of perforated sheet metal, of a gauge which does not retard the action of the thermostat. Standard finish, statuary bronze, but if desired they can be supplied in finishes to correspond to the architectural requirements.

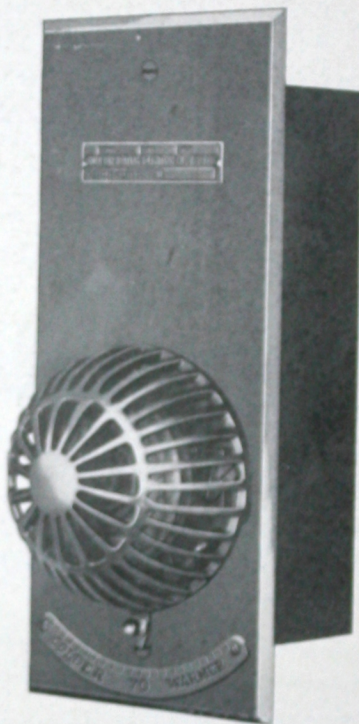


GOLD'S FLUSH TYPE THERMOSTAT NO. 1250

ALL MECHANISM WITH EXCEPTION OF THERMOSTATIC ELEMENT
ENTIRELY CONCEALED IN THE WALL.



Interior View



Outside View, showing Wall Box



Front View

In this method of construction the electric parts are amply protected and the thermostatic element is in a position where it will readily feel the temperature changes.

Gold's flush type thermostat, being rugged and well protected, is especially adapted for installation where the general public come in contact with it. It has a wide range and can easily be set by anyone to maintain the temperature desired.

The operating mechanism is practically the same as our other types, as previously explained, which are giving excellent satisfaction in buildings as well as on railroad cars.

FINISH—Standard finish statuary bronze. Other finishes to suit requirements.

NOTE—The wall box of this thermostat, being of special design, is furnished with the thermostat.



GOLD'S CYLINDER TYPE THERMOSTAT NO. 1210
FOR SUSPENSION FROM CEILING OR OTHER SUPPORT.



The operating mechanism of this type is the same as No. 1066, but is housed in a cylinder type case.

In some instances, in manufacturing plants, etc., it has been almost impossible to properly locate a wall type thermostat where it would operate successfully, owing to the fact that on the wall it would not feel the true general variations in temperature.

GOLD'S CYLINDER TYPE THERMOSTAT overcomes this difficulty, as it can be suspended any required distance from the ceiling or other support in the most advantageous position for perfect regulation.

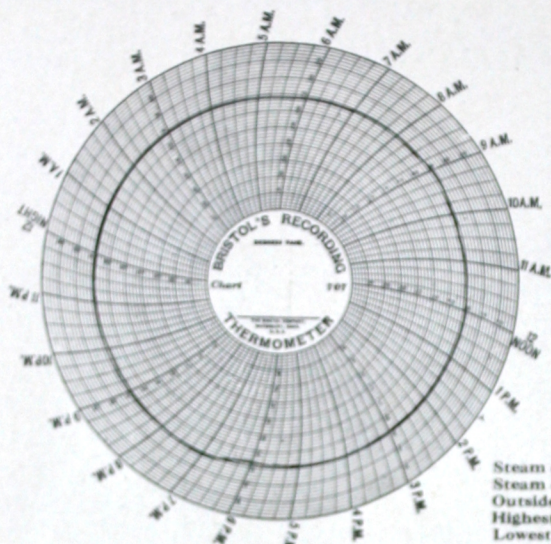
This thermostat is furnished with Key adjustment for varying the temperature, or with plain case with a permanent setting.

Several of this type are now operating successfully on dining cars of one of the large railways of this country.

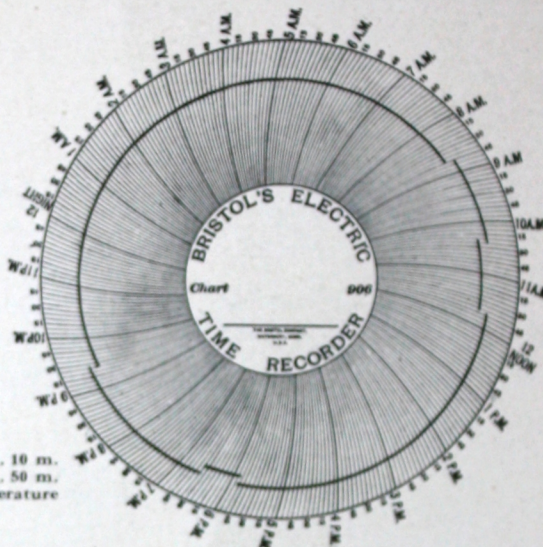


SENSITIVENESS OF GOLD'S THERMOSTATS

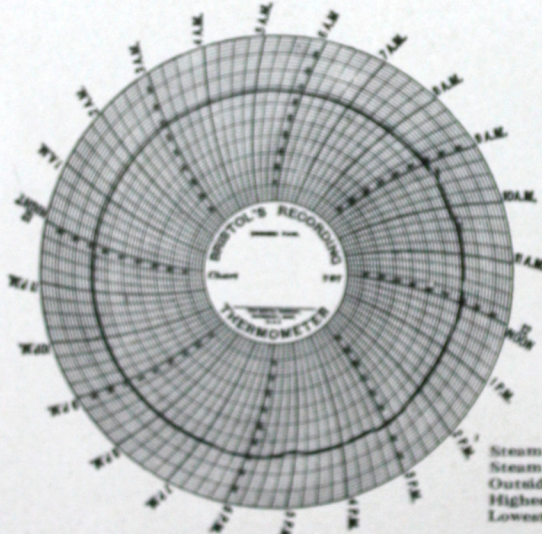
The following 24 hour charts were made in an office equipped with Gold's Unit Type of Radiator Control.



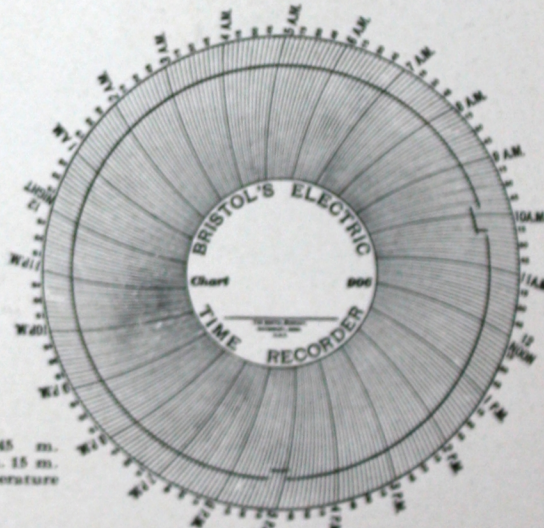
Temperature Chart A



Electric Chart A



Temperature Chart B



Electric Chart B

It will be noticed that the charts are in pairs, one recording the temperature and the other recording the on and off periods of the electric current.

Outer circle of electric chart, current on (steam off).

Inner circle of electric chart, current off (steam on).

While these charts show the even temperature maintained, they also show the saving in steam realized by the application of Gold's Thermostat control.

A steam company that supplies steam to buildings from their district plants is advocating the use of thermostat control to their consumers.

The price of coal is naturally high, therefore if the consumer is lax in the use of steam, their bills seem high. The only alternative is thermostat control which takes the control out of their hands, gives an equable temperature, and saves, at a most conservative figure, 25% in steam consumption.

The more satisfied and contented the consumers are, the more consumers will be the result.

The control installation will more than pay for itself the first season in moderately large buildings.



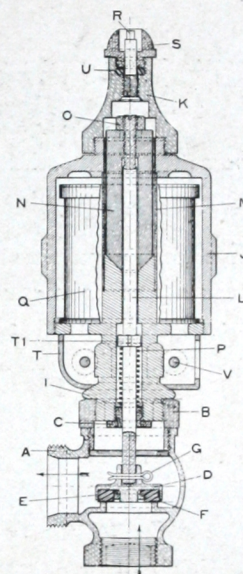
GOLD'S ELECTRO-MAGNETIC RADIATOR VALVES NO. 0981

(FOR DIRECT CURRENT ONLY)

Gold's electro-magnetic bonnets are adaptable to most all standard radiator valve bodies, therefore they can be installed without change in piping.



Gold's Electro-Magnetic Valve



Sectional View

The upper portion of this bonnet contains a solenoid so that when the electric circuit is closed at the thermostat, due to expansion of its temperature sensitive diaphragm, the coil is energized and the valve is forced down or closed, shutting off the steam supply.

The moment the circuit is broken at the thermostat due to contraction of its diaphragm the coil is de-energized and the valve is forced upward or open by a spring, allowing steam again to enter the system. The valve is normally open, therefore any failure of the electrical energy allows the valve to open and heat can be regulated during this emergency by a key at top of valve. The valve is of packless design therefore leak proof.

SIZES AND MAXIMUM OPERATING PRESSURES

Size of valve	Steam Pressures
$\frac{1}{2}$ inch.....	100 pounds
$\frac{3}{4}$ inch.....	60 pounds
1 inch.....	20 pounds
$1\frac{1}{4}$ inches.....	10 pounds
$1\frac{1}{2}$ inches.....	5 pounds
2 inches.....	2 pounds

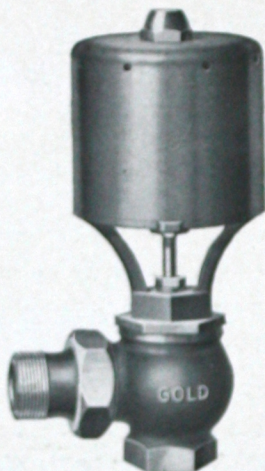
In ordinary low pressure steam systems the wattage consumed per valve is approximately 10 when used in connection with 1 inch valves. When steam pressure or size of valve is increased, wattage is increased accordingly, maximum wattage being 30. Wattage is only consumed when valve is closed.



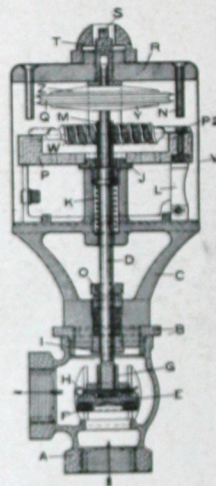
GOLD'S THERMO-ELECTRIC RADIATOR VALVES NO. 1128

(FOR ALTERNATING OR DIRECT CURRENT)

Gold's thermo-electric valve bodies are adaptable to most all standard radiator valve bodies, therefore they can be installed without change in piping.



Gold's Thermo-Electric Valve



Sectional View

This valve will work equally well on alternating or direct current.

In the upper chamber of the valve bonnet is located a double diaphragm containing a volatile liquid, under which is placed an electric heating element, constructed similarly to our electric element in our well-known car heaters, and very substantial. This element when energized as circuit is closed at the thermostat, radiates sufficient heat to expand the diaphragm and close the valve. The valve is normally open, therefore any failure of the electrical energy allows the valve to open and heat can be regulated during this emergency by a key at top of valve.

This valve is, therefore, slightly slower in action than our electro-magnetic valve.

SIZES AND MAXIMUM OPERATING PRESSURES

Size of valve	Steam pressures
$\frac{1}{2}$ inch.....	100 pounds
$\frac{3}{4}$ inch.....	85 pounds
1 inch.....	75 pounds
$1\frac{1}{4}$ inch.....	60 pounds
$1\frac{1}{2}$ inch.....	50 pounds
2 inches.....	20 pounds

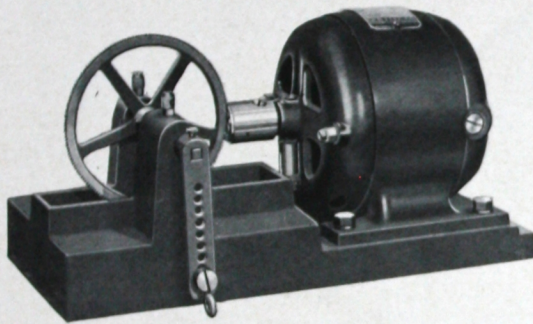
The wattage consumed per valve is approximately 25. Wattage is only consumed when valve is closed.



THE "GOLD" MOTOR

For the operation of dampers and high pressure valves we employ motors.

Our motors are constructed of the best materials possible, and in design, are practically a miniature of the large capacity motors.



Gold's Motor

By referring to illustration, it will be noticed that the motor itself is rigidly mounted on a cast iron bed plate. The shafting and gearing is mounted on this same casting so that they will keep in perfect alignment.

The gears, there being but two, are of heavy design, the large one running constantly in oil located in the well below this gear, other moving parts are amply supplied with oil cups.

The switching mechanism or motor regulator is mounted on the main shaft and is controlled either by our three point thermostat automatically or by push button or toggle switch by hand, a half revolution given to the motor shaft at each impulse, the motor running in same direction at all times.

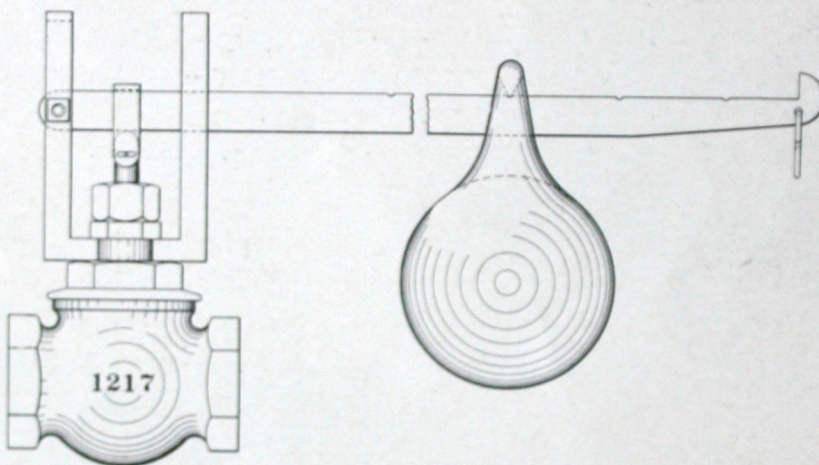
These motors are far superior to the older type with clockwork mechanism and built-in motors of the cheaper variety, and can be relied upon.



Motor Housing showing Brackets.



GOLD'S THERMOSTAT REGULATING VALVE NO. 1217

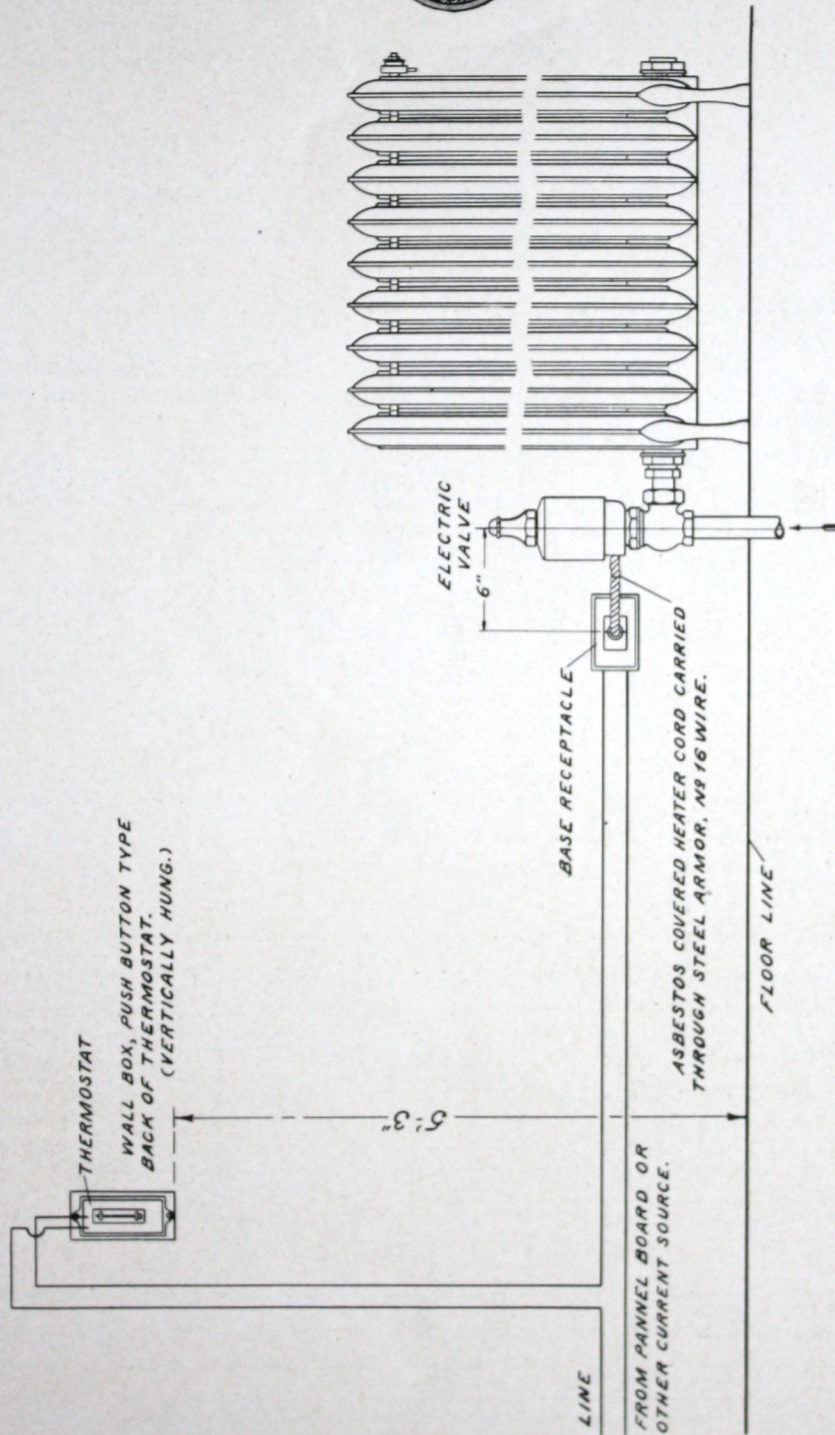


In cases where it is desired to control steam at a higher pressure or through a larger size line than can be handled by our magnetic or thermo-electric valves, we supply this type of valve operated by our motor, description of which is previously given.

This type of valve will handle steam pressures up to 100 lbs. with $1\frac{1}{4}$ inch valve. The valve is substantially constructed and built for service.



GENERAL INSTALLATION PLAN A GOLD'S UNIT TYPE OF RADIATOR CONTROL



Wires can be run concealed or in neat metal moulding. (See specifications on page 14.)



GOLD'S UNIT TYPE OF RADIATOR CONTROL

(SEE GENERAL INSTALLATION PLAN A, PAGE 13)

MATERIAL SUPPLIED WITH EACH EQUIPMENT

FOR INSTALLATION ON EXISTING EQUIPMENT—Thermostat and electrically operated valve bonnets adapted to valve bodies now on the radiators, no change in piping necessary.

FOR INSTALLATION ON NEW EQUIPMENT—Thermostats and electric valve bonnets complete with bodies.

In ordering for existing equipment, specify make, size and type of valve now on the radiator, kind of heating system, maximum steam pressure carried, voltage, and nature of electric current available, alternating or direct.

This system is the simplest on the market to-day.

In old buildings, individual rooms can be equipped very readily, using the lighting current for the operating energy and can be installed without disturbing the piping.

The hand control bonnet is removed from the radiator valve body and replaced by our electric bonnet and wired in accordance with General installation plan A, shown on page 13.

Wires can be run concealed as for lighting or in neat metal moulding as desired.

A switch or cut-out must be provided in the line for cutting off the current during the non-heating season.

SPECIFICATIONS FOR NEW WORK

1. GENERAL—Furnish and install as directed and as shown on plans, the electric thermostatic system of heat control made by the GOLD CAR HEATING & LIGHTING COMPANY, consisting of automatic electric thermostats directly connected to electric valves installed on each radiator, wired in connection with the electric lighting system by the Electrical Contractor.
2. THERMOSTATS to contain a double diaphragm which automatically expands and contracts with variations in temperature above or below a certain fixed degree, closing or opening an electric circuit, thus energizing or de-energizing the electric radiator valves and controlling the flow of steam (or water or vapor).
3. VALVES to be electrically operated, and, when energized or de-energized by the action of the thermostat shall control the flow of steam (or water or vapor).
4. Not more than four valves to be operated by one thermostat.
5. OUTLET BOX. Furnish and install where shown on plans (or where directed by the Heating Contractor), approximately 5 feet 3 inches above floor, outlet box for the thermostat. Box to be vertically hung and to be standard type similar to that used for push button switches. (See note.)
6. RECEPTACLES. Furnish and install in the wall or base back of each radiator, as indicated on plans or as directed by the Heating Contractor a base receptacle of the flush type, approximately 6 inches from either side of the valve and connected to the valve by asbestos covered heater cord carried through steel armor, No. 16 wire being used.
7. WIRES to be run concealed as for the lighting system, connecting the thermostat outlets with the base receptacles, not more than four receptacles being connected with any one thermostat. Valves to be wired in multiple.
- *8. CUT-OUT—Furnish and install where shown on plans (or directed by the Heating Contractor) a cut-out on lighting panel board (or separate) as directed, of proper size and capacity to cut-out the thermostatic control during the non-heating season.
Insert paragraphs 5, 6, 7 and 8 under ELECTRICAL WORK.

NOTE If Gold's flush type thermostat is specified, special outlet box is furnished with the thermostat.

*Where it is desired, wires can be connected to the lighting circuit in each individual room, in which case, no connection is made through the service panel board.

With this method of installation no cut-out is needed for switching off the thermostat circuit during the non-heating season, as the pulling of the plugs from the base receptacles at each valve will obtain the same result.

This method will reduce the cost of installation very materially and give an independent control to each room.

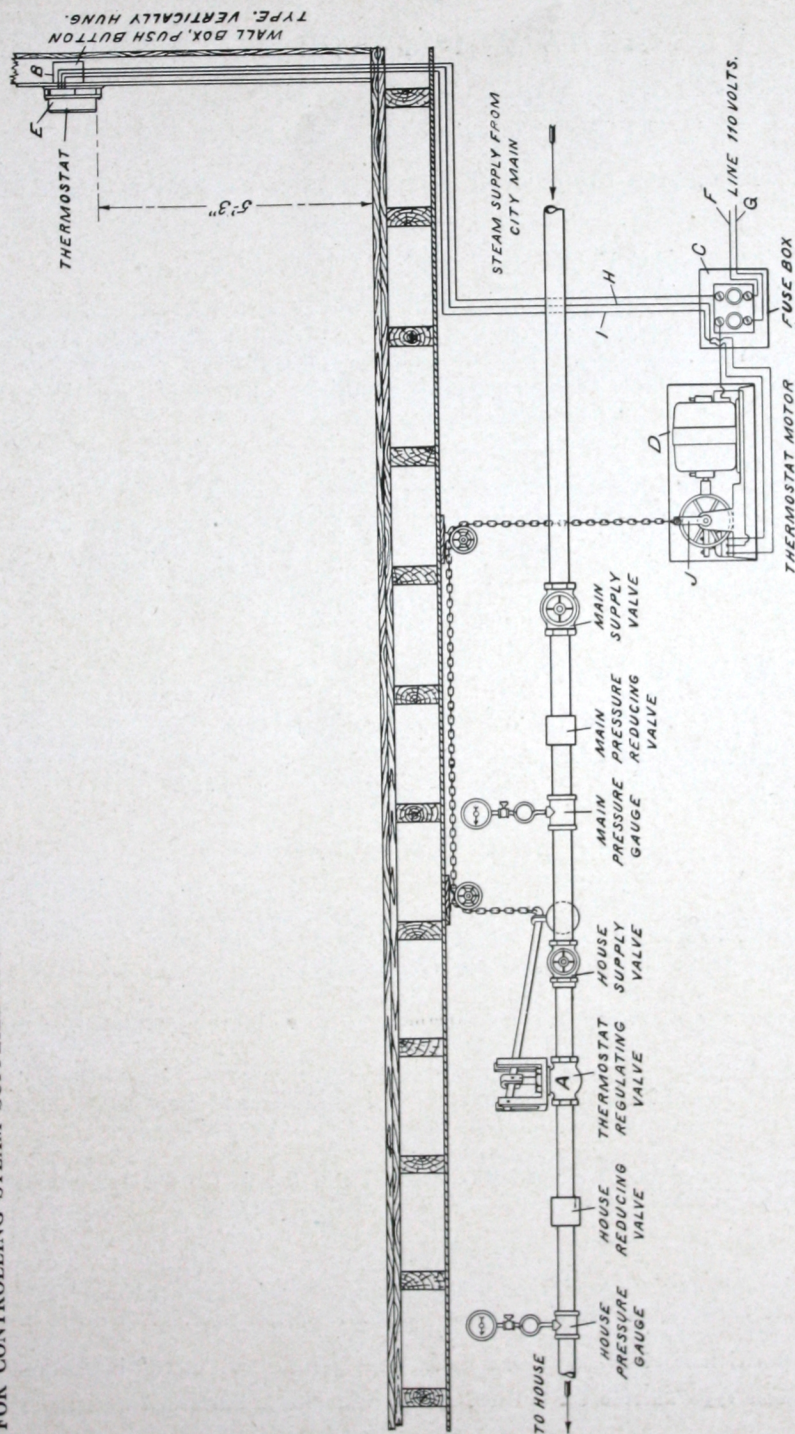
While we prefer the method of installation as given in our specifications the method just described will answer the purpose.

GENERAL INSTALLATION PLAN B
GOLD'S MOTOR CONTROL
FOR CONTROLLING STEAM SUPPLIED FROM OUTSIDE SOURCE.

TEMPERATURE



REGULATION



WIRES CAN BE RUN CONCEALED OR IN NEAT METAL MOULDING

(See specifications on page 16)



GOLD'S MOTOR CONTROL

FOR CONTROLLING STEAM SUPPLIED FROM OUTSIDE SOURCE

(See General Installation Plan B, Page 15)

This system, while giving the equable temperature so desired, will save at least 25% in steam consumption.

Material Furnished with Each Equipment

Thermostat, Thermostat Regulating Valve, and Motor complete with brackets, chains and pulleys.

This type of control is used extensively where houses or plants are heated by steam furnished by outside source. It is easily installed without disturbing decorations.

Care should be taken to locate the thermostat in a position where it will feel the general temperature, such as in living rooms, foyer or main halls, etc.

SPECIFICATIONS

Furnish and install as directed and as shown on plans the Electric Thermostatic system of heat-control manufactured by the Gold Car Heating & Lighting Company consisting of a control valve placed in the main steam line operated by a motor, actuated by a thermostat located in an appropriate position on one of the upper floors. Same to be wired to the 110 volt line and properly protected by fuses.

METHOD OF INSTALLATION (See PLAN "B" PAGE 15)

HEATING CONTRACTOR

Install in the main steam supply line, on the inlet side of the house reducing valve, the Thermostat Regulating Valve A, allowing enough clearance of arm movement to fully open the valve. Offset arms furnished when piping is close to ceiling.

ELECTRICAL CONTRACTOR

Furnish and install in an appropriate position in the living room or other location as specified, 5 feet 3 inches from floor a wall box B, push button switch type, vertically hung. (See note.)

Furnish and install Fuse Box C in a convenient location in the cellar.

Install Thermostat Motor D pulleys and chain, in a position convenient for connecting as shown on plan.

Furnish and install the wiring as shown on plan, which can be run concealed or through metal moulding.

WIRING—Line F through fuse to center terminal of thermostat. Line G through fuse to one motor terminal. Circuits H and I connect one to each of the outside terminals of the thermostat, other ends connect one to each of the motor commutator leads. Leads from motor box are always properly tagged.

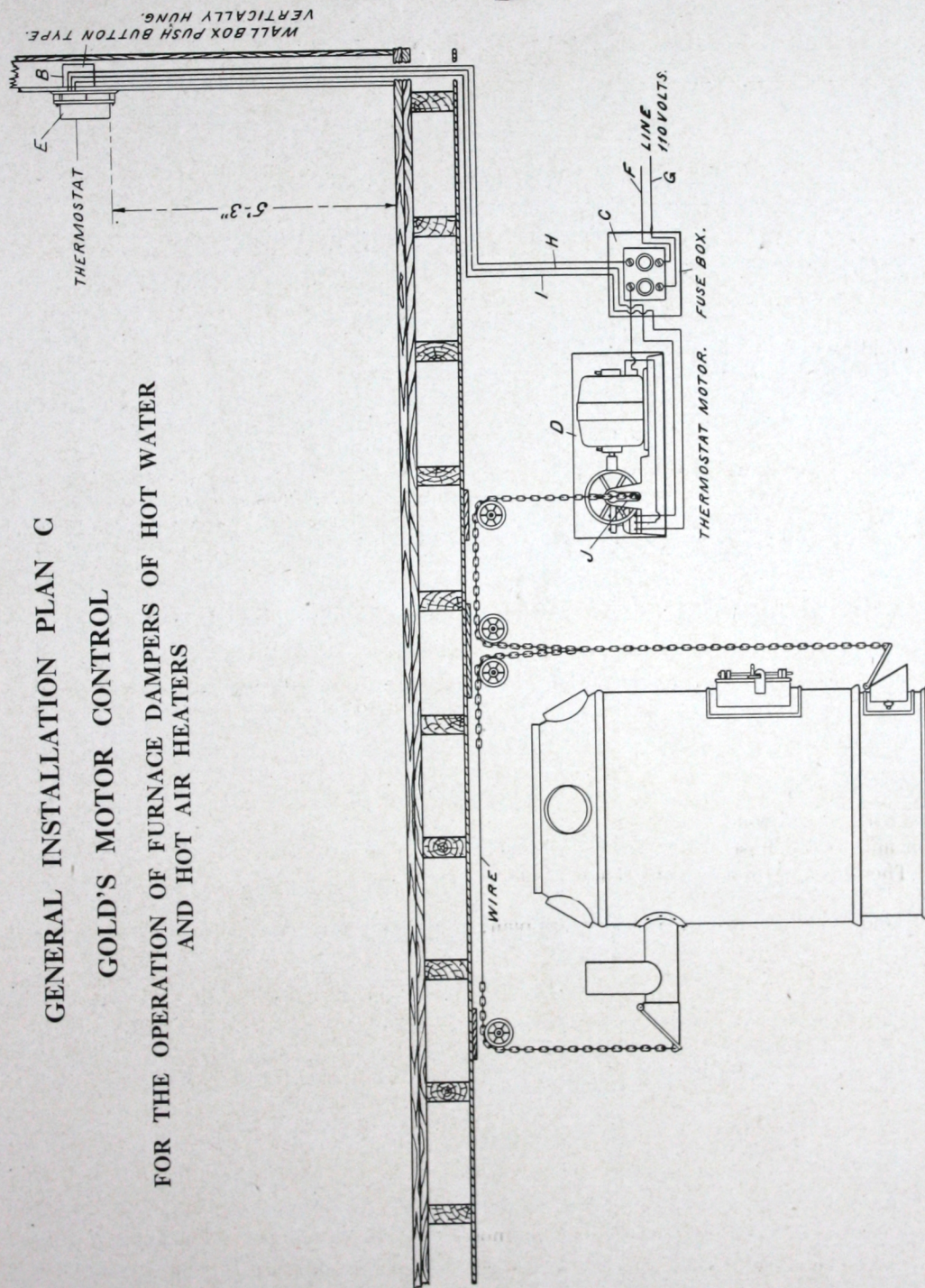
OILING—After erection, put a quantity of heavy oil in the well below the large gear wheel of motor for the lubrication of this gear.

TESTING

In testing, to be sure of the circuits, turn the thermostat pointer to the word COLD. In this position the thermostat valve should be in a closed position. If it is not, reverse the position of the thermostat motor arm J, which will close it.

When correct position is obtained return thermostat pointer to the 70° indication.

NOTE.—If Gold's Flush Type Thermostat is Used, Special Wall Box is Furnished with the Thermostat



GENERAL INSTALLATION PLAN C

GOLD'S MOTOR CONTROL

FOR THE OPERATION OF FURNACE DAMPERS OF HOT WATER
AND HOT AIR HEATERS

Wires Can Be Run Concealed or In Neat Metal Moulding

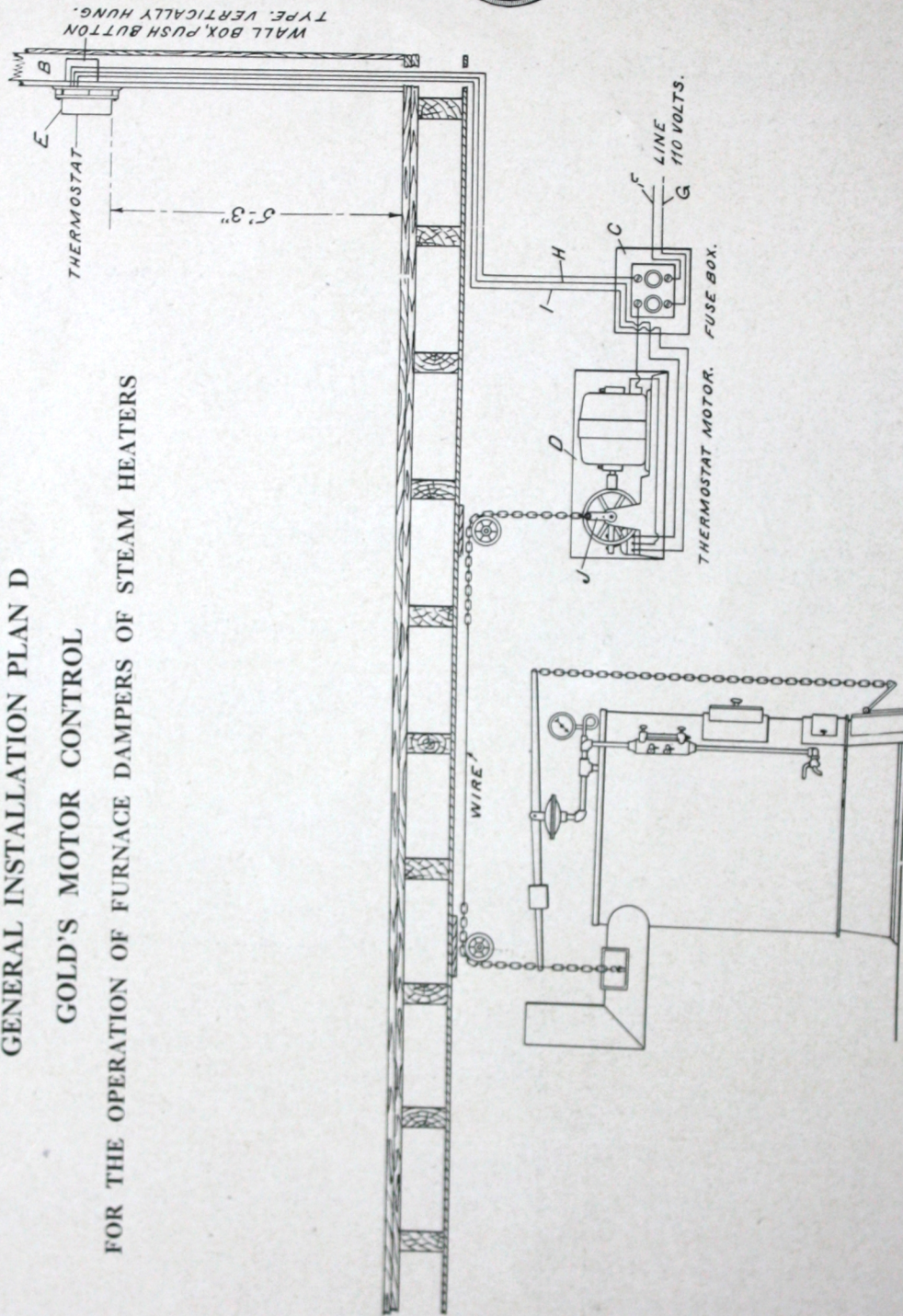
(See Specifications on Page 19)



GENERAL INSTALLATION PLAN D

GOLD'S MOTOR CONTROL

FOR THE OPERATION OF FURNACE DAMPERS OF STEAM HEATERS



Wires Can Be Run Concealed or in Neat Metal Moulding

(See Specifications on Page 19)



GOLD'S MOTOR CONTROL
FOR THE OPERATION OF FURNACE DAMPERS OF HOT WATER
OR HOT AIR HEATERS

(SEE GENERAL INSTALLATION PLAN C, page 17)

Material Furnished with Each Equipment

Thermostat and Thermostat Motor Complete with Brackets, Chains and Pulleys

SPECIFICATIONS

The general specifications and instructions shown on page 16 cover this installation with the exception that the control valve is omitted and that motor chains are connected to the dampers as shown in plan, instead of to the valve. Care should be taken to see that chains are properly adjusted.

TESTING

In testing this installation, turn the thermostat to the word COLD. In this position the front damper should be CLOSED and the rear damper OPEN. If not, reverse the position of the motor arm. If this does not correct the fault, the chains need adjustment.

After adjustment return the thermostat pointer to the 70° indication.

GOLD'S MOTOR CONTROL
FOR THE OPERATION OF FURNACE DAMPERS OF STEAM HEATERS

(SEE GENERAL INSTALLATION PLAN D, page 18)

Material Furnished with Each Equipment

Thermostat and Thermostat Motor Complete with Brackets, Chains and Pulleys

SPECIFICATIONS

The general specifications and instructions shown on page 16 cover this installation with the exception that the control valve is omitted and that motor chain is connected to the rear end of the steam regulator arm. Care should be taken to see that the adjustment of the present regulator chains is correct.

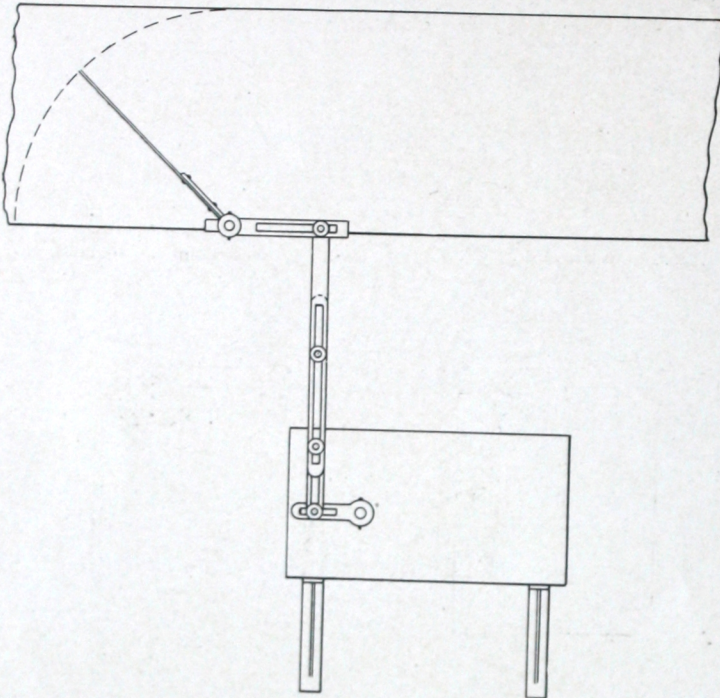
TESTING

Turn the thermostat pointer to the word COLD. In this position the front damper should be CLOSED and the rear one OPEN. If not, reverse the position of the motor arm. If this does not correct the fault, the chains need adjustment.

After adjustment, return thermostat pointer to the 70° indication.



APPLICATION OF GOLD'S MOTORS FOR THE OPERATION OF DAMPERS IN HEATING AND VENTILATING DUCTS



Method of connecting motor to damper shaft.

No damper installations can be successfully operated without some type of automatic control and we believe the simplest method is by Gold's Electric motor system, operated by either a push button located at some central point, or with a thermostat.

The success we have had with installations of this character have been very gratifying.

Material Furnished

Motor complete with hangers, adjustable levers and connecting rods, also thermostat if specified.

SPECIFICATIONS

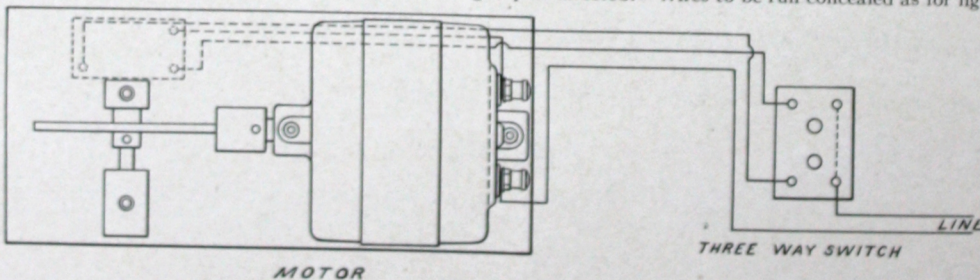
(Ventilating Dampers)

General—Dampers shall be controlled by electric motors of the Gold Car Heating & Lighting Co. with controlling switches located in the boiler room (or other point as directed), obtaining their energy from the 110 Volt lighting circuit.

Electrical Contractor—Shall set the motors and install the apparatus complete, furnishing all wiring and necessary controlling switches.

Motors—To be securely mounted on suitable brackets adjacent to the dampers to which they control and connected thereto by connecting rods.

Wiring—The three wire circuits to be run from the motors to the boiler room (or other point) and a separate three-way switch furnished and installed for the operation of each group as directed. Wires to be run concealed as for lighting.



Wiring Diagram of Motor Operated by Push Button.



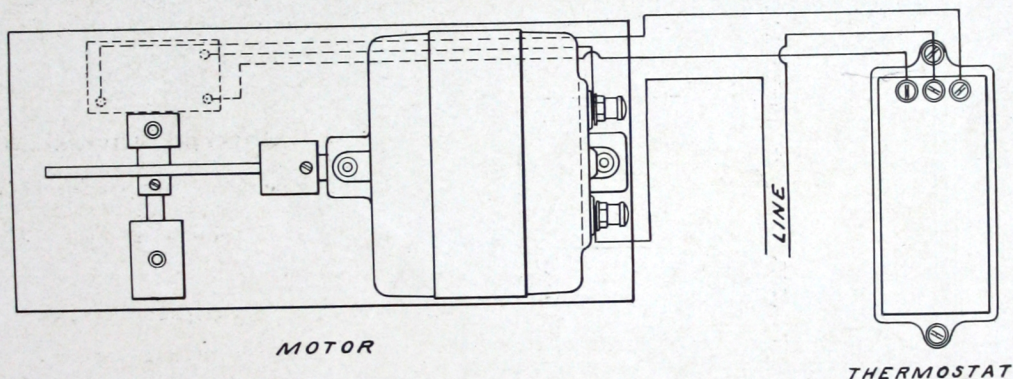
APPLICATION OF GOLD'S MOTORS FOR THE OPERATION OF DAMPERS IN HEATING AND VENTILATING DUCTS

(CONTINUED)

SPECIFICATIONS

(Thermostat Operation)

The installation is similar to the one shown on previous page with the exception that the motor wires are run to the thermostats located in the various rooms, controlling the dampers or group of dampers leading to these points as directed.



Wiring Diagram of Motor Operated by Thermostat.

GOLD'S CONTROL FOR UNIT HEATING AND VENTILATING CABINETS

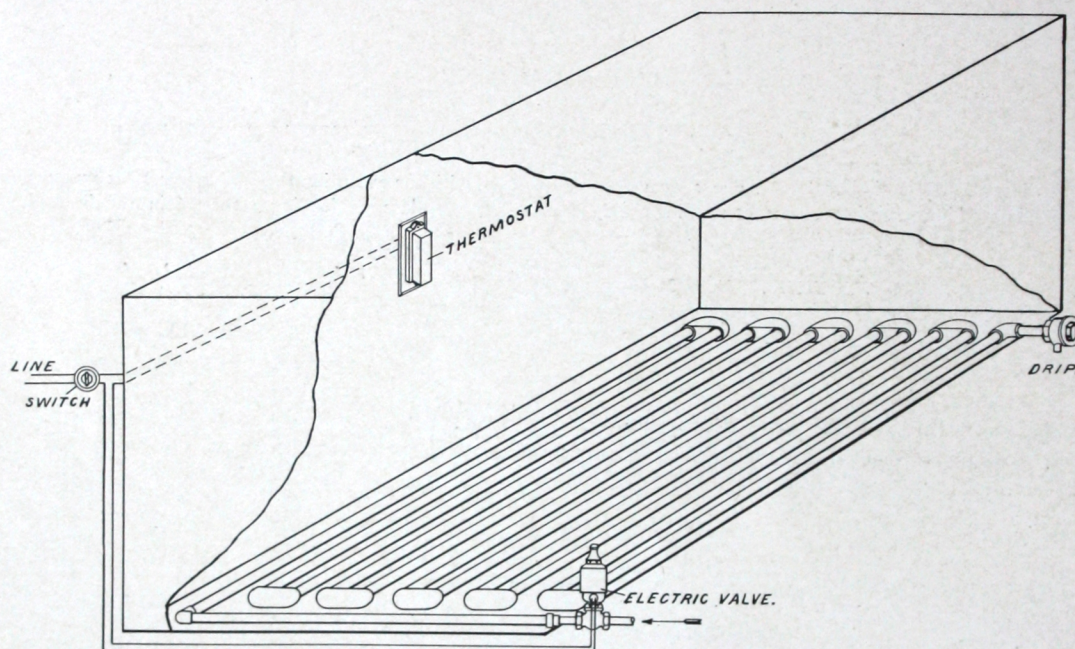
For the operation of the mixing damper of unit heating and ventilating cabinets we supply Gold's Thermo-Electric operating mechanism which is entirely concealed in the cabinet.

This type gives a very gradual opening and closing of the mixing damper according to rise and fall of room temperature. It is silent in operation. Usually used in connection with Gold's No. 1066 Thermostats Types A and B or Flush Type No. 1250. Can be adapted to most any style cabinet now in use.

Further Information on Request



GOLD'S THERMOSTAT CONTROL FOR MAINTAINING THE DESIRED TEMPERATURE IN DRY ROOMS, KILNS, ETC.



Application of Thermostat Control to Dry Room.

Material Furnished

Thermostat and Electric Valve Complete.

Thermostats are invaluable in dry rooms, kilns, etc., where an even temperature must be maintained. Much material has been ruined in the past under manual control, account of the extreme variation in temperature.

Gold's temperature control will overcome this difficulty.

In ordering, specify the temperature desired to maintain, steam pressure carried, size of valve required, voltage on the line and type of current, alternating or direct.

Wires can be run concealed or in metal moulding.

Provide a switch in the line for shutting off the current when not required.

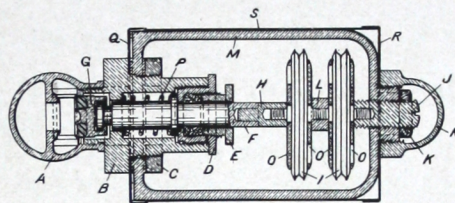


GOLD'S THERMOSTAT CONTROL FOR MAINTAINING THE DESIRED TEMPERATURE OF LIQUIDS IN OPEN TANKS

(NON-ELECTRIC)

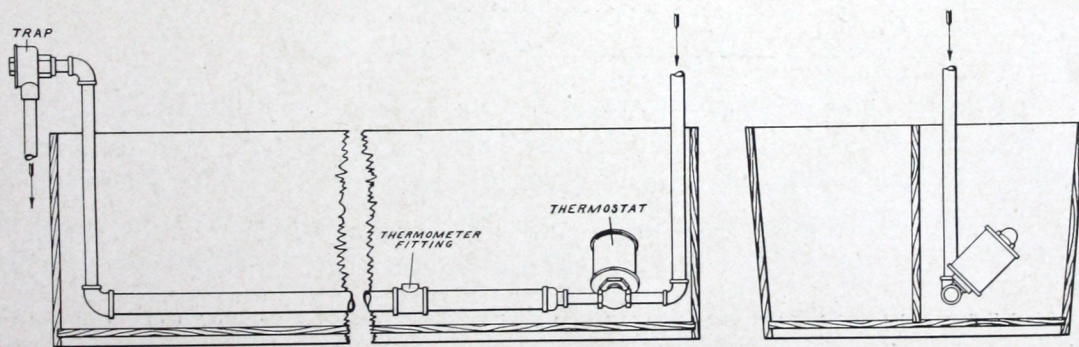


Gold's Tank Thermostat.
No. 1203



Sectional View.

This thermostat is immersed in the liquid and through the agency of the thermostatic diaphragms, expanding and contracting, sufficient steam is admitted to the system to keep the liquid at the desired temperature.



Application to Tank.

Stock Equipment

Size of valve $\frac{3}{8}$ ".

Steam pressure 15-20 lbs.

Write for our proposition on your special requirement.



INSTRUCTIONS AS TO CARE OF GOLD'S TANK THERMOSTAT VALVE NO. 1203

ADJUSTMENT

If desired to either raise or lower the set temperature, remove cap N and loosen Lock Nut K, which will give free motion to adjust Screw J.

For higher temperature, turn the Screw J to the left or counter-clockwise.

For a lower temperature turn the screw J to the right or clock-wise. Always see that the Lock Nut K is tightened after adjustment is made, a thermostat is liable to get out of adjustment if this is not done. Also be sure to replace Cap N to prevent tampering.

TO CHANGE DIAPHRAGMS

To change diaphragms, remove cap N Top R, Case S, and loosen Lock Nut K, then with screw-driver back out the adjusting Screw J almost all the way, then unscrew diaphragms from the adjusting Screw J, push the valve stem H to the left to its seat, this will allow the diaphragms to be freely removed intact, and then by unscrewing these from diaphragm Spacer L, one or both diaphragms may be removed as required.

In replacing diaphragms make up the new elements and apply in a similar manner as they were removed, only reversing the operations.

After reassembling the valve, adjust as per above directions.

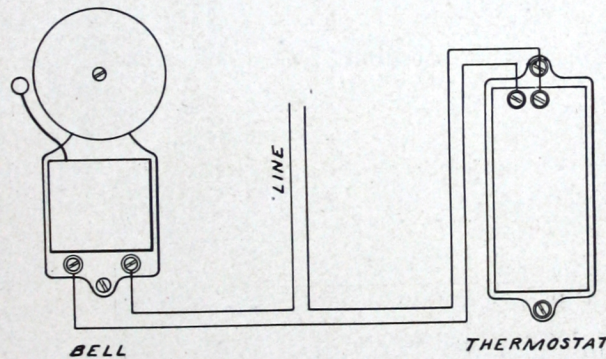


GOLD'S SIGNAL BELL OUTFITS

Gold's thermostats have been successfully used to signal when a critical temperature is reached.

As our thermostat is vibration proof, standing up under the severe conditions encountered on railway cars, it is an ideal one for coal bunkers on ships, ammunition store houses, kilns, dry rooms, etc.

Gold's signal bell outfits can be used directly on any commercial voltage up to and including 110 volts A. C. or D. C. or in connection with batteries.



Wiring Diagram.

Material Furnished

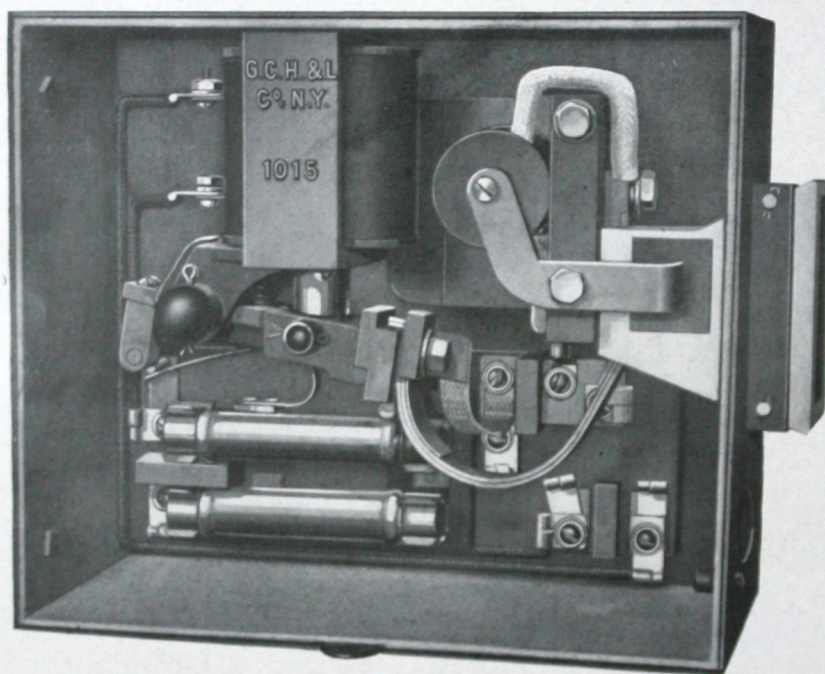
Thermostat and bell complete.



GOLD'S THERMOSTAT CONTROL FOR USE WITH ELECTRIC HEATERS

In communities where current is quite reasonable, due to being generated by water power, electric heaters are coming more and more into use.

Thermostats will aid very materially in advancing this method of heating as they will positively shut off the current as soon as the equable temperature is reached and reduce the cost of current to a minimum.



Gold's Magnetic Switch No. 1015

Gold's thermostats are especially adapted for this service.

An equipment similar to that for electric car heating can be very readily installed.

The main control switch similar to that shown below can be located in the cellar on the main heating line, and the heaters wired in parallel, with a separate snap switch on each heater for cutting out an individual heater if desired.

The thermostat can be located in the living room or hall working directly on the main switch, open-

ing or closing it as required.

This would make an ideal system, and we solicit correspondence on the subject from those interested in this proposition.

ELECTRIC HEATERS

We are prepared to furnish electric heaters of the most substantial type, either portable or stationary for home use or industrial purposes, for use on any voltage from 110 to 1200 and at wattages from 100 to 6000 A. C. or D. C.



CARE OF GOLD'S THERMOSTATIC CONTROL

Thermostats being finely calibrated instruments, should never be tampered with by persons unfamiliar with their operation. Carefully read the description and general make-up of the apparatus and familiarize yourself with it.

Thermostats are carefully inspected, tested and set in strict accordance with the pre-determined range or setting as specified on the order.

Building type thermostats, unless otherwise ordered, are set 70-72° F., that is to cut the heat off at 72° and on at 70°, with pointer set at the 70° mark.

If Key type thermostat is employed, do not leave Key in the thermostat as it leads to tampering by unauthorized persons.

During the non-heating season *always* switch off the current on the thermostat control circuits, either by switch or removing the fuses where no switch is employed. If no switch or fuse is employed pull the plugs from receptacles at each valve.

At the beginning of the following season, blow all dust from the thermostat, then switch on the current and apparatus will again operate.

If motors are used, see that they are properly oiled at the beginning of each season.

If control fails to function, look to the current and ascertain whether or not it is shut off for any reason, possibly a fuse has blown, or if a particular radiator is cold, possibly the radiator air valve needs adjustment.

Do not call for a repair man unless absolutely necessary, as in most cases we have found the fault entirely foreign to the thermostatic control.

While we are ready and willing at all times to aid our customers and give them the advantage of our experience in temperature control, we cannot, in justice to ourselves, stand for the man's time and expenses where it is found that the trouble is foreign to our apparatus, and will therefore render bill for such service.

A little study of your heating apparatus and thermostat control system is interesting and instructive and will avoid many unnecessary calls.

If there is anything you do not understand, or if in difficulty, write or phone us and we will gladly enlighten you.

TO THE PROSPECTIVE CUSTOMER

If you have a problem to solve, why not write us and explain fully what you desire to accomplish. We will be glad to aid you in the selection of the proper control for your particular need.

We solicit correspondence.



NOTE

In addition to the Temperature Regulating Equipments shown in this catalogue The Gold Car Heating & Lighting Company manufactures the following:

Electric Automatic Temperature Regulating Systems for all types of Car Heating Systems regardless of make.

Complete Car Heating Systems including the following:

**Vapor
Combination Pressure and Vapor
Pressure
Hot Water
Heat Storage
Electric**

**Packless Inlet Valves and End Train Pipe Valves
Gold's Cyclone Car Ventilators
Etc., Etc.**

Any Pressure System of car heating can easily be converted into a combination vapor and Pressure system by the introduction of Gold's Non-Adjustable Combination Valve, placed inside of the car. Any Vapor System of car heating regardless of make can be brought strictly up to date by the substitution of Gold's Non-Adjustable Vapor Valves placed inside of the car.

GOLD'S SYSTEMS WILL NOT FREEZE

Write for Literature.

TEMPERATURE



REGULATION

The New York Steam Company

STEAM SERVICE FOR HEAT AND POWER

280 MADISON AVENUE AT 40TH STREET
TELEPHONE VANDERBILT 2850

COMMERCIAL DEPARTMENT

New York, May 7, 1919

Gold Car Heating and Lighting Co.,
17 Battery Place,
New York City.

Gentlemen:-

As the heating season is over, I take this opportunity of advising you that the thermostat and radiator valve control you installed in connection with the radiator in my office several months ago, has been operating continually without the slightest attention. By means of recording thermometers, I am able to state that it will maintain a constant even temperature between 68 and 70 degrees, for which it is set. I believe it is the most practical thermostatic device for radiators that I know anything about.

In addition to the heating field, there is undoubtedly large opportunities for such a thermostatic outfit in the industries that require temperature control, such as the canning industry, dairies and many others, where regulation of temperature means so much in the quality of production.

I cannot speak too highly for it, especially in view of the difficulties and objections to almost all temperature control devices. I will recommend it to our consumers whenever occasion arises.

Very truly yours

WJB KC

TEMPERATURE



REGULATION

TELEPHONE: RECTOR 10,000

THE EQUITABLE LIFE ASSURANCE SOCIETY
OF THE UNITED STATES

120 BROADWAY, NEW YORK

H. H. PENNOCK, MANAGER
ROOM 1122, EQUITABLE BUILDING
MEMBER QUARTER-MILLION CLUB 1917

July 26, 1916.

Gold Car Heating & Lighting Co.,
17 Battery Place, N. Y.

Gentlemen:

In reply to your inquiry as to the working of your Thermostatic Control, which has been installed in my office, would state that it has worked to my entire satisfaction.

For a long time I have been desirous of regulating the temperature, and find that your installation fills this long felt want.

From the length of time the radiator valve is closed, I should judge that, were there many such devices installed in any one building the saving of fuel would be **very** great.

Yours very truly,

TEMPERATURE



REGULATION

MRS. J. W. GATES
WHITEHALL BUILDING
17 BATTERY PLACE
NEW YORK

July 19th, 1918.

Gold Car Heating & Lighting Company,
17 Battery Place,
New York City.

Gentlemen:

I am pleased to state that the
Thermostat installed in my office last winter
has proven to be very satisfactory.

Yours truly,

Dellora R. Gates

NOTE:—Additional testimonials and references on building temperature control furnished on request.

TEMPERATURE



REGULATION

MECHANICAL DEPARTMENT
RICHMOND, FREDERICKSBURG & POTOMAC RAILROAD CO.
WASHINGTON SOUTHERN RAILWAY CO.
RICHMOND, VA.



H. J. WARTHEN,
SUPERINTENDENT MOTIVE POWER

June 28, 1918. g

Mr. E. B. Wilson, Vice-President,
Gold Car Heating & Lighting Company,
17 Battery Place,
New York, N. Y.

Dear Sir:-

Upon receipt of yours of May 27th, I made an investigation of the service obtained from your Thermostatic Control for steam heated cars, and find it has been in use on our line for the past five or six years, and has proven all you claim for it. If properly adjusted this device will control the temperature in a car at any degree desired, working automatically and requiring practically no attention after being once adjusted.

I also find that the cars so equipped use less steam in the heating system in maintaining a normal temperature, thereby insuring passengers a greater degree of comfort as a result of the uniform temperature.

Yours very truly,

Superintendent Motive Power.

NOTE:—Additional testimonials and references on car temperature control furnished on request.

TEMPERATURE



REGULATION